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ABSTRACT

This study investigated the use of the Draw-a-Person: Screening Procedure for Emotional Disturbance (DAP:SPED) with students enrolled in classes for children with emotional disturbances (ED), learning disabilities (LD), or cognitive disabilities (CD). The DAP:SPED was administered to 39 students in a large urban area in eastern Wisconsin and to 31 students in a small town in southern Wisconsin. Students ranged in age from 7 years 0 months to 14 years 7 months. Subjects included Black, Caucasian, Asian, and Hispanic children. Analysis of variance revealed no significant differences for age, geographical density, or race. Findings indicated the DAP:SPED was able to discriminate between the ED and LD samples but not the ED and CD samples. Results also suggested that the scores of all special education groups were generally indistinguishable from the scores of the standardization sample. Overall, the study concludes that the test may not be a reliable instrument for differentiating ED children from other special populations. (Contains 15 references.) (DB)

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Use of the DAP:SPED with a sample of students enrolled in ED, CD and LD public school programs

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Abstract: This study investigated the use of The Draw-a-Person: Screening Procedure for Emotional Disturbance (DAP:SPED) with groups of children enrolled in classes for emotionally disturbed, learning disabled and cognitively disabled children. In this study, the DAP:SPED was able to discriminate between the ED and LD samples but not the ED and CD samples. Results also suggest that the scores of all special education groups were generally indistinguishable from the scores of the standardization sample described in the manual.

Background: Emotional disturbance, although one of the four largest classifications in Special Education (US Dept of Education, 1987), is one of the most confusing and controversial in terms of identification and placement. The ambiguous terminology of the law itself, the lack of agreement in the field regarding the interpretation of the law, and the lack of agreement regarding procedures for diagnosis are only a few of the factors leading to great diversity in the number of students identified as ED from state to state (Executive committee of the CCBD, 1987).

The disagreement in the educational field regarding the diagnostic instruments to be used in the assessment of Emotional Disturbance grows in part from the wide spread criticism of the projective tests which have been the major diagnostic tools of the field. Use of projective tests, with their questionable reliability and dependency on clinical judgment appears to be in direct conflict with the demand for procedures which are legally defensible in due process hearings. There has been growth in the development and use of rating scales (Hutten et al, 1992) but projective measures including drawings, continue to be among the most frequently used tests (Cummings, 1986). While rating scales provide apparently objective and external data, psychologists themselves continue to place more importance on information gained from the children themselves than on any other data collected (Clarizio & Higgens, 1989).

Until now, systematic approaches to the interpretation of human figure drawings using individual signs as indicators of specific disturbances have been developed and widely used, but without much empirical support (Swensen, 1968). Recently, however, there have been attempts to provide an actuarial or quantifiable element to the projective data. This approach involves counting the number of times signs considered to be theoretically associated with disturbance (e.g. figure size and placement, crossed eyes, shading, frowns, talons on the

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hands) appear in a child's drawing as compared to the number found in the drawings of normal individuals. Although Koppitz' (1984) original attempt to create a list of emotional indicators for the Draw A Person technique that would differentiate between normal controls and children with ED failed, Naglieri, McNeish, and Bardos (1991) have created a list of items that have been traditionally associated with emotional disturbance, and produced a standardized procedure to use those items to differentiate between emotionally disturbed students and normal controls.

The Draw A Person: Screening Procedure for Emotional Disturbance (DAP:SPED) (Naglieri, McNeish, & Bardos, 1991) is a 55-item scoring system applied to the drawings of a man, woman and the self. It was developed as a screening measure to aid in the identification of children and adolescents who may have emotional disorders. The specific objectives of this system were to develop a test that 1) can be objectively and reliably scored, 2) has large, recent, representative norms, 3) is an effective screening device, 4) is based on the number of signs associated with emotional problems in the normal population and 5) is compatible with the Quantitative Scoring System (Naglieri, 1989) to obtain an estimate of IQ.

The raw scores on the DAP:SPED are converted to T scores with a mean of 50 and a standard deviation of 10. Suggested cut-off scores which determine the need for further evaluation are 55-65 (moderate indication) and 65+ (strong indication).

The manual provides the results of four studies of clinical samples. The first validity study included 81 male students who had been diagnosed as having a severe behavior handicap according to the Ohio DPI guidelines. The second study consisted of 49 adolescents in a psychiatric residential treatment center, 85% with a DSM III-R diagnosis of conduct disorder. The third Study included 58 children in special education placement who were identified as emotionally disturbed. The fourth study involves 54 children attending a day school program for emotionally disturbed children. In general the children were diagnosed as conduct disorder or oppositional disorder.

Table 1: Subjects and scores from the validation studies listed in the DAP:SPED manual

Sample	N	Age		DAP:SPED T-score		Percentages	
		M	sd	M	sd	Males	White
1	81	10.6	1.4	55.3	10.6	100	75
2	49	15.3	1.1	57.0	6.4	67	72
3	58	12.1	1.2	54.8	9.2	86	91
4	54	13.0	2.6	56.6	10.3	78	95

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The original studies focused on emotionally disturbed adolescents who were mainly white. The purpose of the present study is to determine whether the device is useful for younger children and for non-white children. It will also attempt to determine whether or not the device can accurately distinguish between emotional disturbance and other handicapping conditions. If the DAP:SPED can only be used on a small segment of students, and if it cannot accurately differentiate between emotional difficulties and learning or cognitive difficulties, then its usefulness is severely limited.

PROCEDURE

Subjects

The DAP:SPED instrument was administered to 39 students in a large urban area in eastern Wisconsin and to 31 students in a small town (pop. 10,000) in southern Wisconsin. Students were selected from three identified special education populations, including emotionally disturbed, cognitively disabled, and learning disabled. Students ranged in age from 7 years 0 months to 14 years 7 months, and the population included both males and females. The ethnic background of the subjects included Black, Caucasian, Asian, and Hispanic.

Table 2: The subjects screened in the current study of DAP:SPED scores

Group	N	Age M	Age sd	% Male	% Minority
Rural CD	9	10.2	1.2	55%	0%
Urban CD	10	12.9	.2	40%	90%
Rural ED	9	10.3	2.0	67%	0%
Urban ED	12	10.3	2.5	100%	58%
Rural LD	13	8.4	1.3	69%	0%
Urban LD	17	12.5	1.3	70%	88%

Method

The DAP:SPED was administered to children in each of the three exceptional education categories described above. Both administration and scoring procedures described in the manual were strictly followed. Raw scores were transformed into T-scores for each participant. Additionally, each T score was compared to the cut-off scores ($\leq$55 or $\leq$65) to determine whether further assessment was indicated.

RESULTS AND DISCUSSION

Analysis of variance revealed no significant differences for age (7 to 9 vs. 10 to 14), geographical density (urban vs. rural), or race (white vs. non-white). A comparison of special education categories, using an ANOVA, indicated significant results. Post hoc protected t-tests indicated a difference between LD and CD, ($F=3.07$, $df=47$, $p<.05$) and ED and LD ($F=2.21$, $df=49$, $p<.05$).

Table 3: Analysis of Variance for Exceptional Education Category

Source	DF	SS	MS	F	D
C2	2	656.6	328.3	5.31	0.007
Error	67	4145.1	61.9		
Total	69	4801.8			

	N	Mean	sd
ED	21	48.48	8.5
LD	30	43.53	7.2
CD	19	51.63	7.3

Examination of the data revealed a significant difference between the ED and the LD populations in the present study, which suggests that the DAP:SPED is able to differentiate these two special populations. This would be expected due to the hypothesized validity of the instrument. However, no significant difference between the ED and the CD populations was observed. This finding suggests that the DAP:SPED is unable to discriminate between these two special populations. The significant difference between the LD and the CD populations may be explained by the developmental delays in the CD population. The immaturity frequently observed in the drawings of CD children (lack of appendages, facial features, etc.) may result in a higher T score.

Table 4: Protected t - test information

	ED	CD	LD
ED			$p < .05$; 2.21
LD		$p < .05$; 3.08	

According to Naglieri, children identified as ED would have T scores of at least 55. Yet, the results of this study indicated that less than 50% of the ED sample would have been referred for further evaluation at this criterion. In addition, at the cut-off score of 65, no ED students would have been identified. Further inspection of the data in Table 5 suggests that a larger proportion of the ED sample than the LD or CD sample would have been screened for further evaluation. However, 6.6% of the LD population and 21% of the CD population would have been falsely screened in the present study.

Table 5: Percentages of children identified by the manual T-score cutoff

Group	Total N	T-score: 55-64		T-score above 65	
		N	%	N	%
ED total	21	7	33%	0	0%
CD total	19	4	21%	1	5%
LD total	30	30	6.6%	1	3.3%

The results from Naglieri's normal sample indicate that the highest percentage in the current ED population is close to the percentage which would have been identified in his normal sample. An evaluation of Naglieri's normal population suggests that 30% of the sample would have been falsely identified, while 47% of his ED population would not have been identified. The current research suggests that 67% of the ED population would have been missed by the screening.

Table 6: Percentages identified in the normative studies for further evaluation

Group	N	% above 55	% above 65
Normative group	4468	31%	6.68%
Naglieri's ED Total	240	50-53%	13-18%

In conclusion, the current research suggests that the cutoff scores indicated by the DAP:SPED manual would not have identified more ED children than would have been identified in the standardized population, and that the test may not be a reliable instrument for

differentiating ED children from other special populations. In comparison to the initial validation studies (Naglieri, McNeish, & Bardos, 1991), the mean T-scores of the present study were considerably lower. Furthermore, the ED sample in the current study was similar to the standardization sample, rather than the ED population in the initial validity studies. The results may have been affected by a number of factors. The children tested were all enrolled in public schools, which suggests that they may have been less severe in their disabilities than children from residential treatment facilities. Another factor is that children may have been placed in exceptional education classes not because of a clearly defined pathology, but because of a combination of cognitive and behavioral difficulties. In addition, the Ohio state criteria for emotional disturbance may not identify the same population of students when compared to the Wisconsin state criteria. Finally, further research would need to include a sample of children from regular education classes for comparison purposes to determine whether special education children score differently from their peers in regular education.

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